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L Number	Hits	Search Text	DB	Time stamp
-	4	("20030084054" "20030084061").pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 11:23
-	10	(6,055,539 5,877,775 5,761,667 5,386,394 5,379,422).pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 12:33
-	4	6055539.URPN.	USPAT	2004/08/16 11:24
-	4	6055539.URPN.	USPAT	2004/08/16 11:38
-	0	717/156.ccls. and directed with non with cyclic with graph	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 12:35
-	0	717/156-161.ccls. and direct\$4 with non with cyclic with graph\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 12:35
-	137	717/156.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 12:59
-	13	(graph same observ\$4) and (node same observ\$4) and (node same pair\$4) and (graph same walk\$4) and hierarch\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:21
-	2	"directed non-cyclic graph".ti.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:21
-	0	"directed cyclic graph".ti.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:22
-	37	"directed acyclic graph".ti.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:53
-	4	("6263332"   "6347307"   "6366934"   "6457103").PN.	USPAT	2004/08/16 13:24
-	3	(graph near5 walk\$4 near5 system) and (analyz\$4 near5 graph\$4 near5 hierarch\$4 near5 data)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:56
-	3	(graph with walk\$4 with system) and (analyz\$4 with graph\$4 with hierarch\$4 with data)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:58
-	2	(graph with (walk\$4 or observ\$4) with system) and ((analyz\$4 or observ\$4) with graph\$4 with hierarch\$4 with data) and optimiz\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/16 13:59
-	37	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:30

-	4	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure) and dag	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:26
-	3	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure) and (cyclic same graph)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:30
-	3	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure) and (cyclic same graph) and xml	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 10:32
-	1	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure) and (non adj cyclic same graph) and xml	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:36
-	1	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure) and (non adj cyclic) and xml	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:37
-	1	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same graph) near5 (data near4 structure) and (non adj cyclic)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:37
-	3	((walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) same (non adj cyclic) same graph)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:38
-	3	((non adj cyclic) same graph) and (walk\$4 or analyz\$4 or optimiz\$4 or observ\$4) and xml	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:38
-	0	6741242.URPN.	USPAT	2004/08/17 09:40
-	21	((non adj cyclic) same graph) and (walk\$4 or analyz\$4 or optimiz\$4 or observ\$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:41
-	3	((non adj cyclic) same graph) and xml	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:44
-	32	((non adj cyclic) same graph)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 09:44
-	1	6654761.pn. and walk\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 13:50
-	0	("6654761" "20020162096").pn. and walk\$4 and prun\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 13:51
-	0	20020162096.pn. and walk\$4 and prun\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/17 13:51

-	2	20020162096.pn. and prun\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/17 14:35
-	4	("5,761,664" "4,698,752").pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/17 15:33
-	1	(event near3 manager near3 generat\$4) same (node near3 observ\$4) same (deactivated or reactivated)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/17 15:35
-	344	event near3 manager near3 generat\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/17 15:35
-	5	(event near3 manager near3 generat\$4) and (sub adj node)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/17 15:37
-	0	("6055539" "6681221" "20020162096").pn. and (event same manager)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/17 15:38

INSPEC

File : INSPEC

SS Results

1	1483235	ANALYSIS OR ANALY+
2	223957	PARALLEL+
3	7239	WALK
4	36658	TREE
5	289479	MINIM+
6	16509	WALK+
7	25947	NODE
8	55222	HIERARCH+
9	112385	PATTERN#
10	52	TREE AND WALK###
11	2915	PRUN+
12	475	SUBTREE
13	8	1 AND 10
14	50420	1 AND 2
15	123	( 3 OR 6) AND 14
16	100	NODE# AND 6
17	3	14 AND 16
18	36772	( 4 OR 12)
19	22	16 AND 18
20	130	13 OR 15
21	100	16
22	1483235	ANALYSIS OR ANALY+
23	223957	PARALLEL+
24	7239	WALK
25	36658	TREE
26	289479	MINIM+
27	16509	WALK+
28	25947	NODE
29	55222	HIERARCH+
30	112385	PATTERN#
31	52	TREE AND WALK###
32	2915	PRUN+
33	475	SUBTREE
34	8	22 AND 31
35	50420	22 AND 23
36	123	( 24 OR 27) AND 35
37	100	NODE# AND 27
38	3	35 AND 37
39	36772	( 25 OR 33)
40	22	37 AND 39
41	130	34 OR 36
42	100	37

Search statement 43

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Search statement 43

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INSPEC

1/22 INSPEC - (C) INSPEC

AN : 6694890  
ABN : C2000-10-4240P-008  
TI : A method for evaluating the expected load of dynamic tree embeddings in hypercubes.  
AU : Kegin Li  
OS : Dept. of Math. & Comput. Sci.; State Univ. of New York; New Paltz; NY; USA  
SO : International Journal of Foundations of Computer Science, vol.11, no.2, pp. 207-230, June 2000  
PU : World Scientific  
CP : Singapore  
DT : J (Journal Paper)  
LA : English  
JC : IFCSN  
NU : ISSN 0129-0541  
PY : 2000  
SI : 0129-0541(200006)11:2L.207:MEEL;1-2  
AB : A key issue in performing tree structured parallel computations is to distribute process components of a parallel program over processors in a parallel computer at run time such that both the maximum load and dilation are minimized. This paper presents the application of recurrence relations in studying the performance of a dynamic tree embedding algorithm in hypercubes. We develop recurrence relations that characterize the expected load in randomized tree embeddings where, a tree grows by letting its nodes to take random walks of short distance. By using these recurrence relations, we are able to calculate the expected load on each processor. Therefore, for constant dilation embeddings, we are able to evaluate expected loads numerically and analytically. The applicability of recurrence relations is due to the recursive structure of trees and the fact that embeddings of the subtrees of a process node are independent to each other. Our methodology does not depend on the hypercube topology. Hence, it can be applied to studying dynamic tree growing in other networks. (36 Ref.)  
IT : hypercube networks; parallel programming; probability; random processes; topology; trees (mathematics)  
ST : randomised tree embedding; hypercubes; parallel program; recurrence relations; recursive structure; random walk  
TC : TM (Theoretical/Mathematical)  
CC : C4240P Parallel programming and algorithm theory;  
C6110P Parallel programming;  
C6150N Distributed systems software;  
C1140Z Other topics in statistics;  
C1160 Combinatorial mathematics  
CPR : Copyright 2000, IEE

2/22 INSPEC - (C) INSPEC

AN : 6653907  
ABN : C2000-09-1230-002  
TI : ANTS: agents on networks, trees, and subgraphs.  
AU : Wagner IA; Lindenbaum M; Bruckstein AM  
OS : IBM Haifa Res. Lab.; Israel  
SO : Future Generation Computer Systems, vol.16, no.8, pp. 915-926, June

2/22 INSPEC - (C) INSPEC

AN : 6653907

ABN : C2000-09-1230-002

TI : ANTS: agents on networks, trees, and subgraphs.

AU : Wagner IA; Lindenbaum M; Bruckstein AM

OS : IBM Haifa Res. Lab.; Israel

SO : Future Generation Computer Systems, vol.16, no.8, pp. 915-926, June 2000

PU : Elsevier

CP : Netherlands

DT : J (Journal Paper)

LA : English

JC : FGSEVI

NU : ISSN 0167-739X

PY : 2000

CPN : 0167-739X/2000/ \$20.00

SI : 0167-739X(200006)16:8L.915:AANT;1-R

DN : S0167-739X(00)00045-5

AB : Efficient exploration of large networks is a central issue in data mining and network maintenance applications. In most existing work there is a distinction between the active 'searcher' which both executes the algorithm and holds the memory and the passive 'searched graph' over which the searcher has no control at all. Large dynamic networks like the Internet, where the nodes are powerful computers and the links have narrow bandwidth and are heavily-loaded, call for a different paradigm, in which a noncentralized group of one or more lightweight autonomous agents traverse the network in a completely distributed and parallelizable way. Potential advantages of such a paradigm would be fault tolerance against network and agent failures, and reduced load on the busy nodes due to the small amount of memory and computing resources required by the agent in each node. Algorithms for network covering based on this paradigm could be used in today's Internet as a support for data mining and network control algorithms. Recently, a vertex ant walk (VAW) method has been suggested (Wagner, Lindenbaum, and Bruckstein (1998)) for searching an undirected, connected graph by an a(ge)nt that walks along the edges of the graph, occasionally leaving 'pheromone' traces at nodes, and using those traces to guide its exploration. It was shown there that the ant can cover a static graph within time  $nd$ , where  $n$  is the number of vertices and  $d$  the diameter of the graph. In this work we further investigate the performance of the VAW method on dynamic graphs, where edges may appear or disappear during the search process. In particular we prove that (a) if a certain spanning subgraph  $S$  is stable during the period of covering, then the VAW method is guaranteed to cover the graph within time  $nd_S$ , where  $d_S$  is the diameter of  $S$ , and (b) if a failure occurs on each edge with probability  $p$ , then the expected cover time is bounded from above by  $nd((\log \Delta / \log(1/p)) - ((1+p)/(1-p)))$ , where  $\Delta$  is the maximum vertex degree in the graph. We also show that (c) if  $G$  is a static tree then it is covered within time  $2n$ . (29 Ref.)

IT : data mining; fault tolerance; graph theory; search problems; software agents

ST : network maintenance; autonomous agents; network covering; vertex ant walk; dynamic graphs; edge failure model; dynamic graph search; edge

ant walk; cover time  
TC : TM (Theoretical/Mathematical)  
CC : C1230 Artificial intelligence;  
C1160 Combinatorial mathematics;  
C6170 Expert systems;  
C6170K Knowledge engineering techniques  
CPR : Copyright 2000, IEE

3/22 INSPEC - (C) INSPEC

AN : 6643365  
ABN : C2000-08-4260-043  
TI : On minimum diameter spanning trees under reload costs.  
AU : Wirth HC; Steffan J  
ED : Widmayer P; Neyer G; Eidenbenz S  
OS : Dept. of Comput. Sci.; Wurzburg Univ.; Germany  
SO : Graph-Theoretic Concepts in Computer Science. 25th International Workshop, WG'99. Proceedings (Lecture Notes in Computer Science Vol.1665), pp. 78-88, Published: Berlin, Germany, 1999, xi+414 pp.  
PU : Springer-Verlag  
CP : Germany  
DT : PA (Conference Paper)  
LA : English  
NU : ISBN 3540667318  
PY : 1999

CONF : Graph-Theoretic Concepts in Computer Science. 25th International Workshop, WG'99. Proceedings (Lecture Notes in Computer Science Vol.1665), Ascona, Switzerland, 17-19 June 1999

AB : We examine a network design problem under the reload cost model. Given an undirected edge colored graph, reload costs arise at the nodes of the graph and are depending on the colors of the pair of edges used by a walk through the node. In this paper we consider the problem of finding a spanning tree of minimum diameter with respect to the underlying reload costs. We present hardness results and lower bounds for the approximability even on graphs with maximum degree 5. On the other hand we provide an exact algorithm for graphs of maximum degree 3. (5 Ref.)

IT : computational geometry; graph colouring; trees (mathematics)  
ST : minimum diameter spanning trees; reload costs; undirected edge colored graph; hardness results; lower bounds  
TC : PR (Practical); TM (Theoretical/Mathematical)  
CC : C4260 Computational geometry;  
C1160 Combinatorial mathematics  
CPR : Copyright 2000, IEE

4/22 INSPEC - (C) INSPEC

AN : 6237168  
ABN : C1999-06-4220-008  
TI : Trips on trees.  
AU : Engelfriet J; Jan Hoogeboom H; Van Best JP  
OS : Dept. of Comput. Sci.; Leiden Univ.; Netherlands  
SO : Acta Cybernetica, vol.14, no.1, pp. 51-64, 1999  
PU : Jozsef Attila Univ. Dept. Inf  
CP : Hungary  
DT : J (Journal Paper)



ant walk; cover time  
TC : TM (Theoretical/Mathematical)  
CC : C1230 Artificial intelligence;  
C1160 Combinatorial mathematics;  
C6170 Expert systems;  
C6170K Knowledge engineering techniques  
CPR : Copyright 2000, IEE

3/22 INSPEC - (C) INSPEC

AN : 6643365  
ABN : C2000-08-4260-043  
TI : On minimum diameter spanning trees under reload costs.  
AU : Wirth HC; Steffan J  
ED : Widmayer P; Neyer G; Eidenbenz S  
OS : Dept. of Comput. Sci.; Wurzburg Univ.; Germany  
SO : Graph-Theoretic Concepts in Computer Science. 25th International Workshop, WG'99. Proceedings (Lecture Notes in Computer Science Vol.1665), pp. 78-88, Published: Berlin, Germany, 1999, xi+414 pp.  
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CP : Germany  
DT : PA (Conference Paper)  
LA : English  
NU : ISBN 3540667318  
PY : 1999

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AB : We examine a network design problem under the reload cost model. Given an undirected edge colored graph, reload costs arise at the nodes of the graph and are depending on the colors of the pair of edges used by a walk through the node. In this paper we consider the problem of finding a spanning tree of minimum diameter with respect to the underlying reload costs. We present hardness results and lower bounds for the approximability even on graphs with maximum degree 5. On the other hand we provide an exact algorithm for graphs of maximum degree 3. (5 Ref.)

IT : computational geometry; graph colouring; trees (mathematics)  
ST : minimum diameter spanning trees; reload costs; undirected edge colored graph; hardness results; lower bounds.....  
TC : PR (Practical); TM (Theoretical/Mathematical)  
CC : C4260 Computational geometry;  
C1160 Combinatorial mathematics  
CPR : Copyright 2000, IEE

4/22 INSPEC - (C) INSPEC

AN : 6237168  
ABN : C1999-06-4220-008  
TI : Trips on trees.  
AU : Engelfriet J; Jan Hoogeboom H; Van Best JP  
OS : Dept. of Comput. Sci.; Leiden Univ.; Netherlands  
SO : Acta Cybernetica, vol.14, no.1, pp. 51-64, 1999  
PU : Jozsef Attila Univ. Dept. Inf  
CP : Hungary  
DT : J (Journal Paper)

6/22 INSPEC - (C) INSPEC

AN : 5773979  
ABN : C9801-4230M-019  
TI : Barrel shifter-a close approximation to the completely connected network in supporting dynamic tree structured computations.  
AU : Kegin Li  
OS : Dept. of Math. & Comput. Sci; State Univ. of New York; New Paltz; NY; USA  
SO : Proceedings of the IEEE 1997 National Aerospace and Electronics Conference. NAECON 1997 (Cat. No.97CH36015), Pt. vol.1, pp. 202-215 vol.1, Published: New York, NY, USA, 1997, 2 vol. ix+1079 pp.  
PU : IEEE  
CP : USA  
DT : PA (Conference Paper)  
LA : English  
NU : ISBN 0780337255  
PY : 1997  
CONF : Proceedings of the IEEE 1997 National Aerospace and Electronics Conference. NAECON 1997 (Cat. No.97CH36015), Dayton, OH, USA, 14-17 July 1997, Sponsored by: Dayton Sect. IEEE, Aerosp. & Electron. Syst. Soc. IEEE  
CPN : CH36015-97/97/0000-0202 \$1.00  
AB : High performance computing requires high quality load distribution of processes of a parallel application over processors in a parallel computer at runtime such that both maximum load and dilation are minimized. The performance of a simple randomized tree growing algorithm on the barrel shifter and the Illiac networks is studied in this paper. The algorithm spreads tree nodes by letting them to take random walks to neighboring processors. We develop recurrence relations that characterize expected loads on all processors. We find that the performance ratio of probabilistic dilation-1 tree embedding in the barrel shifter network with N processors (a network with node degree  $O(\log N)$ ) is very close to that in the completely connected network of the same size. However, the hypercube network, which also has node degree  $\log N$ , does not have such a capability. As a matter of factor, even the Illiac network, which is a subnetwork of the barrel shifter, has an optimal asymptotic performance ratio. (30 Ref.)  
IT : multiprocessor interconnection networks; parallel processing; performance evaluation; probability; tree data structures  
ST : completely connected network; barrel shifter network; dynamic tree structured computations; parallel computer; randomized tree growing algorithm; Illiac network; recurrence relations; probabilistic dilation-1 tree embedding; optimal asymptotic performance ratio  
TC : TM (Theoretical/Mathematical)  
CC : C4230M Multiprocessor interconnection;  
C5220P Parallel architecture;  
C5470 Performance evaluation and testing  
CPR : Copyright 1997, IEE

7/22 INSPEC - (C) INSPEC

AN : 5670867  
ABN : C9710-4210L-012  
TI : Monadic second order logic and node relations on graphs and trees.  
AU : Bloem R; Engelfriet J

8/22 INSPEC - (C) INSPEC  
 AN : 5455814  
 ABN : C9702-6130B-010  
 TI : Hierarchical image caching for accelerated walkthroughs of complex environments.  
 AU : Shade J; Lischinski D; Salesin DH; DeRose T; Snyder J  
 OS : Washington Univ.; WA; USA  
 SO : Computer Graphics Proceedings. SIGGRAPH '96, pp. 75-82, Published: New York, NY, USA, 1996, 528 pp.  
 PU : ACM  
 CP : USA  
 DT : PA (Conference Paper)  
 LA : English  
 NU : ISBN 0897917464  
 PY : 1996  
 CONF : Computer Graphics Proceedings. SIGGRAPH '96, New Orleans, LA, USA, 4-9 Aug. 1996, Sponsored by: ACM  
 CPN : 0 89791 746 4/96/008. \$3.50  
 AB : We present a new method that utilizes path coherence to accelerate walkthroughs of geometrically complex static scenes. As a preprocessing step, our method constructs a BSP-tree that hierarchically partitions the geometric primitives in the scene. In the course of a walkthrough, images of nodes at various levels of the hierarchy are cached for reuse in subsequent frames. A cached image is reused by texture-mapping it onto a single quadrilateral that is drawn instead of the geometry contained in the corresponding node. Visual artifacts are kept under control by using an error metric that quantifies the discrepancy between the appearance of the geometry contained in a node and the cached image. The new method is shown to achieve speedups of an order of magnitude for walkthroughs of a complex outdoor scene, with little or no loss in rendering quality. (20 Ref.)  
 IT : cache storage; image texture; rendering (computer graphics); tree data structures  
 ST : hierarchical image caching; accelerated walkthroughs; complex environments; path coherence; geometrically complex static scenes; BSP-tree; cached image; texture-mapping; visual artifacts; error metric; complex outdoor scene; rendering quality; image-based rendering; spatial hierarchy; texture mapping; level of detail  
 TC : PR (Practical)  
 CC : C6130B Graphics techniques;  
 C6120 File organisation  
 CPR : Copyright 1996, IEE

Search statement 48

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12/22 INSPEC - (C) INSPEC  
 AN : 4072319  
 TI : Incremental attribute evaluation.

13/22 INSPEC - (C) INSPEC